

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-9, 18-26, 35-60 are presently active in this case, Claims 1 and 18 are amended by way of the present amendment.

In the outstanding Official Action, Claims 1-5, 9, 18-22, 24, 25, 35-39, 41, 42, 45-47, 49-52, 54, 55, and 58-60 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,700,084 to Yasukawa et al.; Claims 6, 23, 40 and 53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yasukawa et al. in view of U.S. Patent No. 5,367,140 to Jouaneh et al.; and Claims 7, 8, 26, 43, 44, 48, 56 and 57 were objected as being dependent on a rejected based claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

First, Applicants wish to thank Examiner Trail and Primary Examiner Fureman for the November 16, 2004 personal interview at which time the outstanding issues in this case were discussed. During the discussion, Applicants presented remarks substantially as contained herein. During the discussion, Examiner Trail acknowledged an understanding of the invention and indicated that, in view of our discussion, independent Claims 1, 18, 35 and 49 in their current form are allowable over the cited references. However, Primary Examiner Fureman indicated that Claims 1 and 18 include an informality. These claims have now been amended to correct the informality and therefore, as agreed in the November 16th interview, all claims in this case are patentable over the cited references and the rejection of the outstanding Official Action will be withdrawn. However, Applicants note that three nonfinal rejections have already been issued in this case. Therefore, Applicants respectfully request that upon review of this response if Examiner Trail feels that a new grounds of rejection can be made, then Examiner Trail contact the undersigned to give Applicants an opportunity to

incorporate the allowable subject matter into the independent claims to place this case in condition for allowance without issuance of a fourth non-final rejection.

In addition, Applicants wish to thank Examiner Trail for indication that Claims 7, 8, 26, 43, 44, and 48 would be allowable if amended to include the limitations of the base claim and any intervening claims. However, Applicants wish to maintain these claims in dependent form at this time since agreement was reached that such claims patentably define over the cited references without substantive amendment.

Turning now to the merits, Applicants' invention is directed to a method and system for assembling an optical module having a light emitting element and an optical component. As discussed in the background section of Applicants' specification, prior art methods of assembling such a module require the use of a camera to detect a diameter and position of a light output from the light emitting element and passing through the optical component. As shown in Figures 2A and 2B, such a detection process is performed with the camera at a first distance from a light emitting element and then with the camera moved to a second distance from the light emitting element. The diameter and position corresponding to the first distance of the camera is then compared to that of the second distance of the camera, and the optical component is moved in an x and y direction to obtain correspondence between the two distances. However, this conventional method of assembly is very time consuming and presents several other problems noted in the background section of Applicants' specification. Applicants' invention is directed to a method of more efficiently assembling an optical module.

Specifically, Claim 1 recites a method of assembling an optical module including a light emitting element and at least one optical component, the method including the steps of measuring a far field pattern (FFP) of light output from the at least one optical component, which is configured to receive the light emitted from the light emitting element. Also recited

is positioning the at least one optical component based on the FFP. Independent Claims 18, 35 and 49 similarly recite, in different claim formats, the feature of detecting a FFP to facilitate assembly of an optical module. As discussed in the November 16, 2004 personal interview, the present inventors have recognized that unlike the camera of the prior art, an FFP measurement device does not need to be moved to different distances with respect to the light emitting element during assembly of the optical module. Specifically, the present inventors have recognized that a far field pattern measuring device is capable of measuring a divergent angle and/or outgoing angle of a light emitting element without changing the distance between the far field pattern measuring system and the light emitting element. Therefore, the claimed invention allows assembly of the optical module more quickly than the prior art systems or methods.

The cited reference to Yasukawa et al. discloses a system for determining a skewed light output of a light emitting element so that such skewed output can be compensated for during a subsequent assembly of the light emitting element with optical components. As seen in Figure 2 of Yasukawa et al., the skew of a light output from a laser device is determined by placing the laser device on a multi-access stage 10 and moving the multi-access stage while detecting the light in the measurement optical system 30. That is, the measurement optical system 30 is a system for detecting the skew and not part of an optical module. Thus, as discussed in the November 16th interview, the cited reference to Yasukawa et al. does not disclose a method of assembling an optical module at all.

Moreover, to the extent that the Official Action may consider the measurement optical system 30 to read on the optical module of the claims, Applicants note that the detectors 33 and 36 used in the optical measurement system are not FFP measurement devices. As described at column 7, line 2 of Yasukawa et al., detectors 33 and 36 are CCD cameras such as those used in the Prior Art systems discussed above. Thus, as agreed in the November 16th

interview, Yasukawa et al. also does not disclose measuring a far field pattern of a light output from the at least one optical component configured to receive the light emitted from the light emitting element as required by claims 1, 18, 35 and 49.

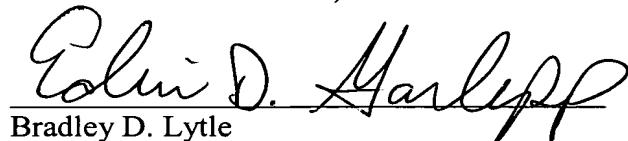
While the cited reference to Jouaneh et al. discloses a method for laser welding of optical packages, this reference does not disclose measuring a far field pattern of a light emitting element. Thus, as also discussed in the November 16th interview, Jouaneh et al. does not correct the deficiencies of Yasukawa et al.

For the reasons discussed above, Applicants' independent Claims 1, 18, 35 and 49 patentably define over the cited references. Moreover, as the remaining pending claims in this case dependent from one of these independent claims, the remaining pending claims also patentably define over the cited references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application. The present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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